

INTRO



SETUP
&
BUTTON



DVD

Operating Instructions

DVD/VHS Home Theater Sound System

Model No. **SC-HT830V**
SC-HT833V

**ADVANCED
PROGRESSIVE SCAN**
(DVD)

page **8**

**EASY-TO-USE 5 DVD/CD
CHANGER WITH QUICK
START CD KEY**

page **18**

**LONG 10h RECORDING/
PLAYBACK & HIGH SPEED
x600 TAPE REWIND**
(VHS)

page **28**



RADIO
&
OTHERS

If you have any questions, please call
In the U.S.A.: 1-800-211-PANA (7262)
In Canada: 1-800-561-5505

Before connecting, operating or adjusting this product, please
read the instructions completely. Please keep this manual for
future reference.

For U.S.A. only

The warranty can be found on page 49.

For Canada only

The warranty can be found on page 50.

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THAT CURTAINS AND ANY OTHER
STRUCT THE VENTILATION VENTS.

LIES ONLY IN THE U.S.A.

System Installation

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Injury from

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

UTION WHEN OPEN.

E INTO BEAM.

VISIBLE LASER RADIATION WHEN OPEN.
CLASS II LASER PRODUCT. IEC60825-1 / Class 3b
SYNUNG LA

INTRO

RQLXS0054

(Inside of product)

unit.



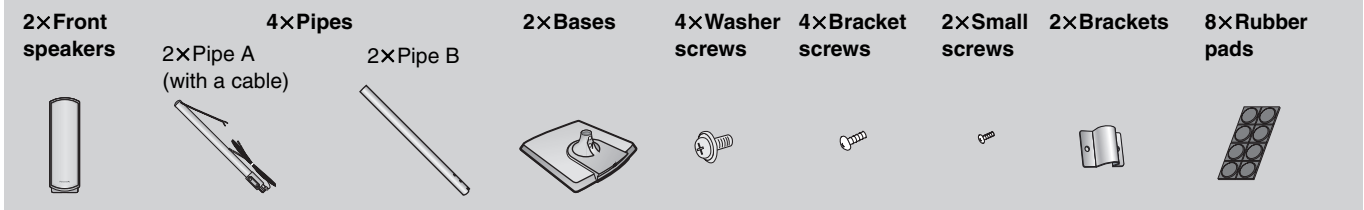
Simple setup

STEP 1 Front speaker assembly

The supplied stands are specially designed for attachment to Panasonic SB-FS730 front speakers. Use only as indicated in this setup.

Preparation

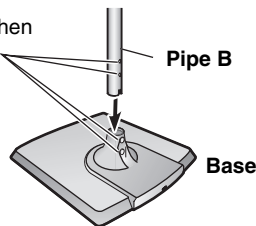
- To prevent damage or scratches, lay down a soft cloth and perform assembly on it.
- For assembly, use a Phillips-head screwdriver.
- Make sure you have all the indicated components before starting assembly, setup, and connection.
- There is no difference between the right and left speakers and pipes.



1 Attach pipes B to the bases.

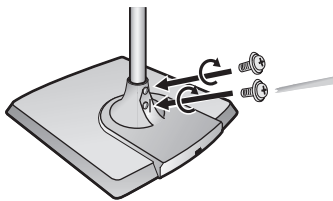
A Insert pipe B.

Match these holes when you insert the pipe.



B Secure pipe B to the base.

Ensure the screws are securely fastened.



2 Assemble the pipes.

A Thread the speaker cable from Pipe A through Pipe B and the base.

For quicker threading, loosely fold the cable in half (do not crease), pass the folded portion through the pipe, and then pull the rest of the cable through the base.

B Join Pipe A to Pipe B.

C Secure the pipes.

Ensure the screw is securely fastened.

3 Attach pipes A to the speakers.

Slot the screw head in between the 2 stoppers of the speaker groove.

Align the screw head with the speaker groove.

Ensure the pipe is fastened on straight by gradually tightening the right and left screws alternately until fully tightened.

To prevent short-circuit, do not cover the connection terminals with the pipe.

4 Connect the speaker cables.

5 Secure the speaker cable to the base.

Note

You can use the front speakers without assembling with the stands. In this case, attach the included rubber pads to the base of the speakers. This prevents vibration from causing the speakers to move or fall over. Use 4 pads per speaker.



STEP 3 Connecting speakers with the subwoofer

- Attach the speaker-cable stickers to make connection easier.
- The terminals of the subwoofer have high output power. Carefully connect the speaker wires.

Speaker cables

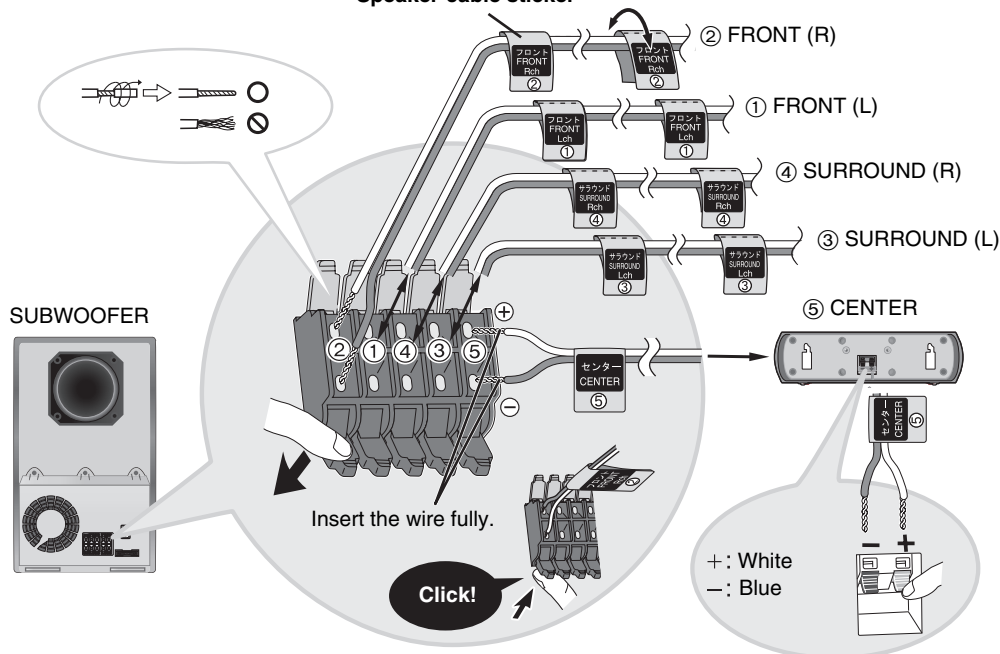
- 1×short cable: For center speaker
- 2×long cables: For surround speakers



Sheet of speaker-cable stickers



Speaker-cable sticker



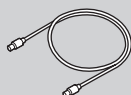
Note

- Never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (White) wires to positive (+) terminals and negative (Blue) wires to negative (-) terminals. Incorrect connection can damage the speakers.

STEP 4 Video connections

Basic connection

75 Ω coaxial cable



Video cable

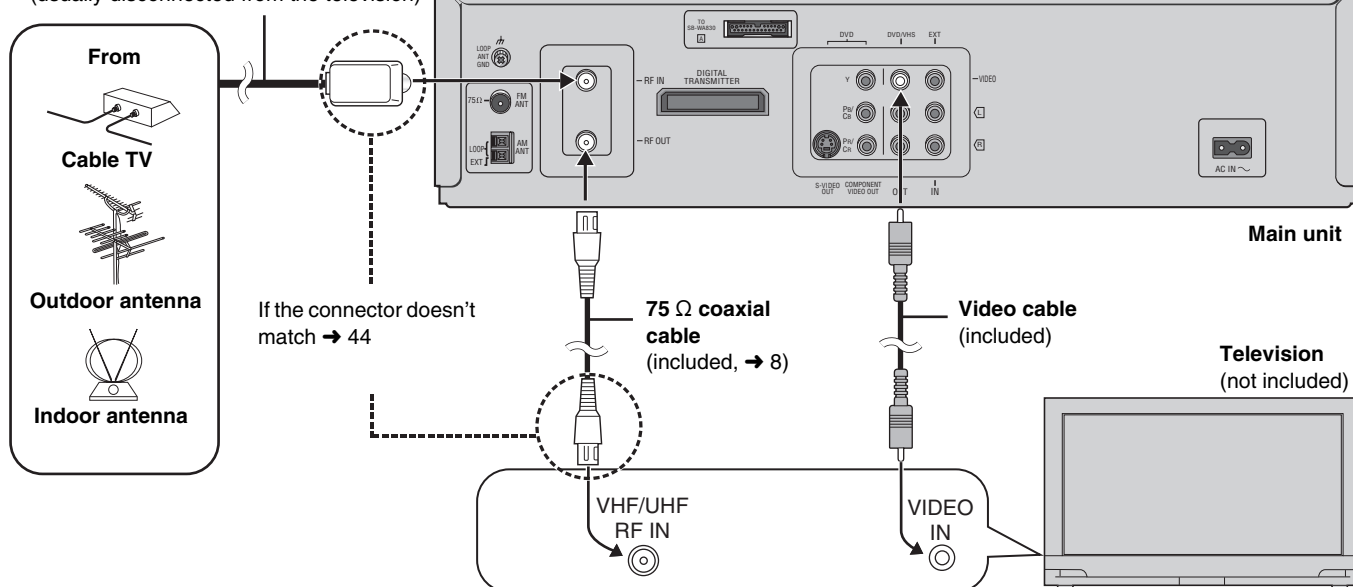


Connect video cables directly to your television

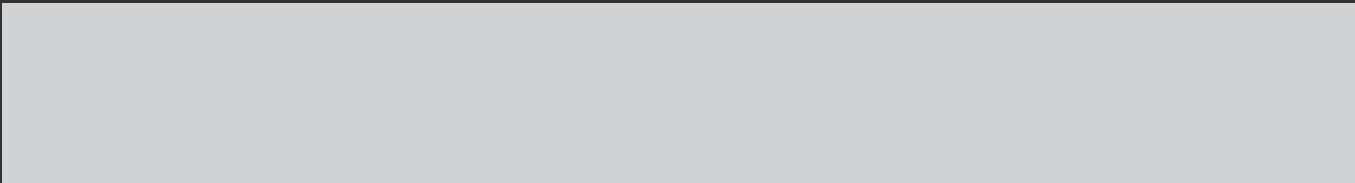
The video signals on DVDs and videotapes have copyright protection. The video may not be shown correctly if you connect through an A/V selector or other equipment.

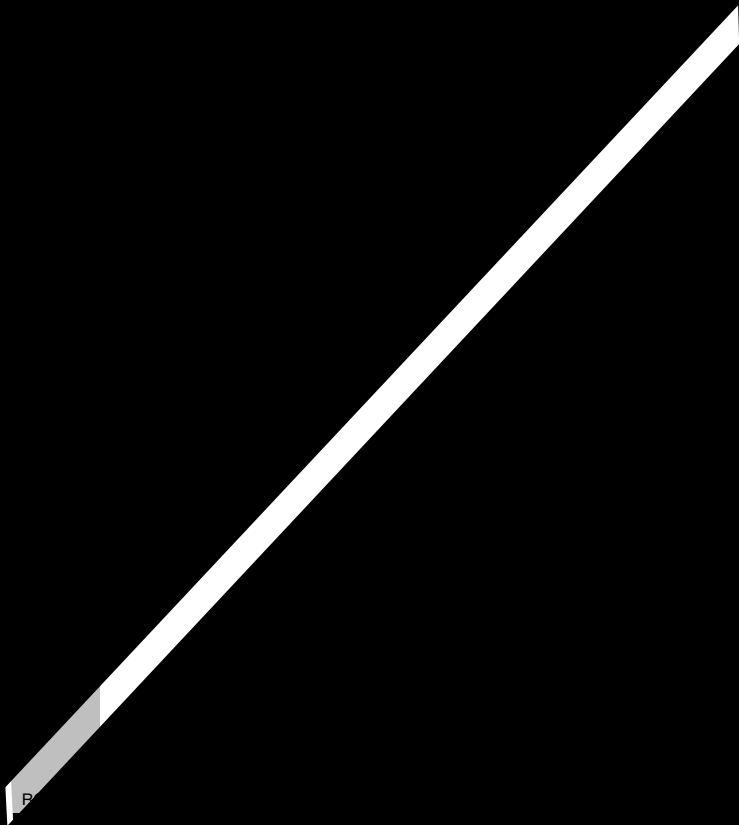
Antenna cable (not included)

(usually disconnected from the television)











After plugging the unit into your household AC outlet and pressing [⏻] to turn the unit on for the first time, the unit automatically tunes in all the channels it can receive and sets the clock.

The unit determines the type of transmission, TV or CATV, as follows:
TV: when there are less than 5 CATV channels.
CATV: when there are 5 or more CATV channels.

Preparation

- Confirm that the antenna is connected correctly.
- Turn on the television and select the video input for the VHS.
- Press [VHS] to put the remote control in VHS mode.

Press [⏻] to turn on the unit.

Plug-in Auto Tuning starts and the unit puts the stations it can receive into channels (→ 37, Channel range).



The unit starts auto clock setting when finished, then displays the time.

Note

If auto tuning stops partway (by changing the source, turning the unit off, or due to a power failure).

- 1 Disconnect the AC power supply cord on the main unit and then reconnect it.
- 2 Turn on the main unit.

To cancel partway

Press [MENU].

■ To start Plug-in Auto Tuning again (after relocation, for example)

Preparation

- Press [⏻] to turn on the unit.
- Make sure there is no video cassette tape loaded in the unit.
- Press [DVD/VHS] to select "VHS" as the source.

- 1 Press and hold [^ CH] and [v CH] on the main unit simultaneously for 3 seconds until the channel changes to "2".

- 2 Disconnect the AC power supply cord on the main unit and then reconnect it.
- 3 Turn on the main unit. Plug-in Auto Tuning restarts.

■ To set the channels manually (→ 37).

■ If the unit couldn't set the clock automatically

The MANUAL CLOCK SET screen appears. Set the time manually (→ 36).

■ Batteries

Do not:

- mix old and new batteries.
 - use different types at the same time.
 - heat or expose to flame.
 - take apart or short circuit.
 - attempt to recharge alkaline or manganese batteries.
 - use batteries if the covering has been peeled off.
- Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

■ Use

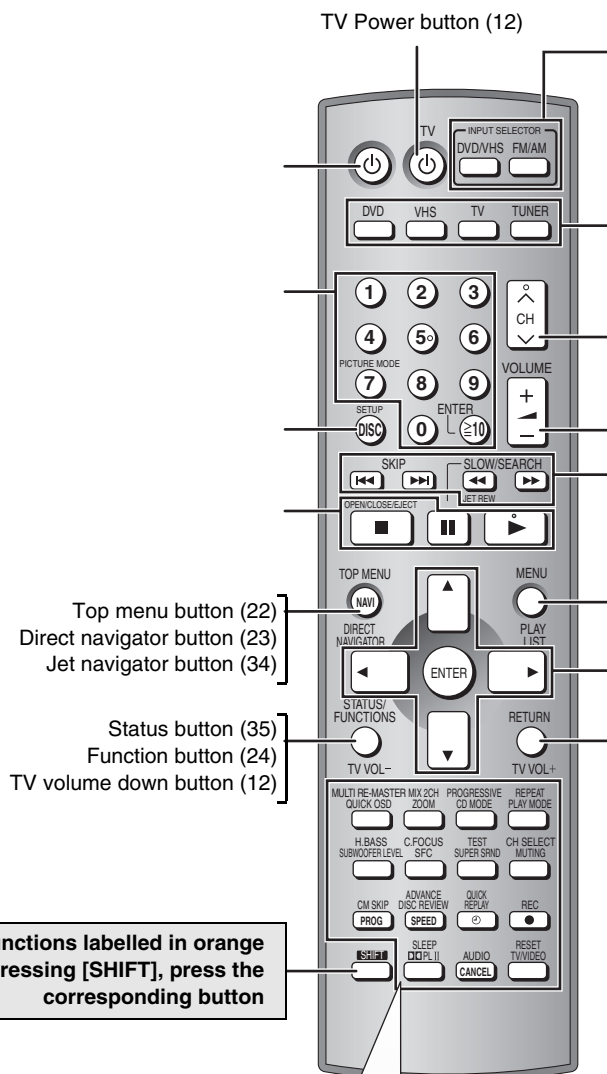
Aim at the sensor (→ 14), avoiding obstacles at a maximum range of 7 m (23 feet) directly in front of the unit.



Control reference guide

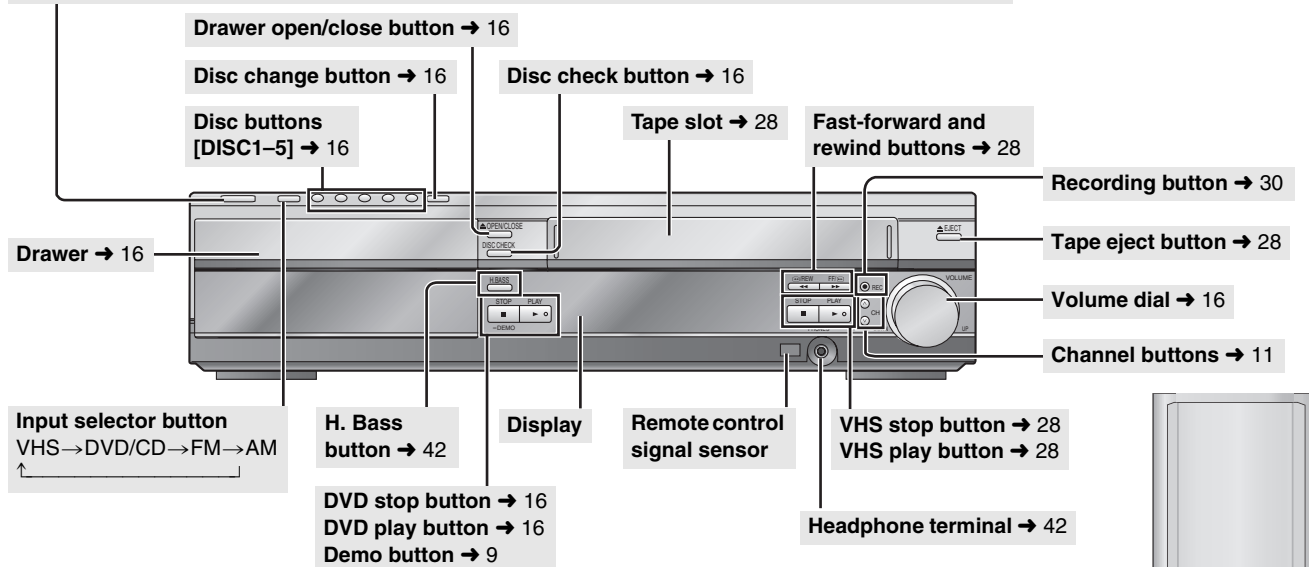
• See reference pages in brackets.

Remote control



Main unit and subwoofer

Power button [⏻/POWER] → 11; Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.

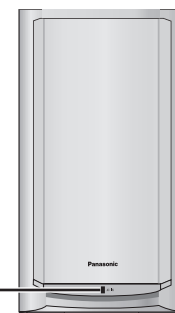


Note

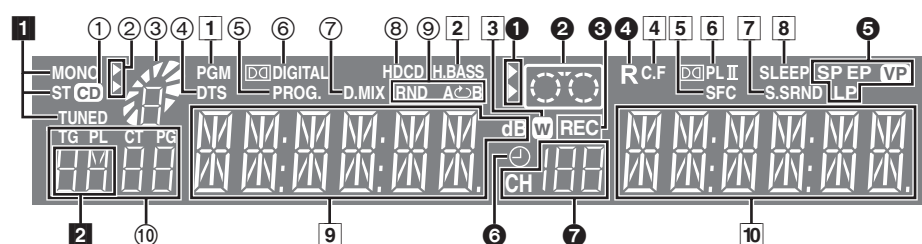
- "BYE" is displayed when the unit turns off. Remove the power plug after this display disappears.

AC supply indicator [AC IN]

- This indicator lights when the subwoofer is connected to the household AC outlet and through the system cable to the main unit.
- When main unit is turned on, this indicator will light on or vice versa.
- The indicator light turns off in approximately 10 seconds after the unit is disconnected from the AC outlet.



Main unit display



Common display

- Program indicator** 20, 40
- H. Bass indicator** 42
- Wireless Theater indicator** 9
 - Indicates when you use the Digital Transmitter and Receiver.
- Center Focus indicator** 41
- Sound Field Control indicator** 41
- Dolby Pro Logic II indicator** 41
- Super Surround indicator** 41
- SLEEP timer indicator** 42
- Main display (Orange)**
 - Disc play elapsed time, program recording start time, volume, TUNER frequency/channel display, various messages, etc.
- Main display (White)**
 - Time display, video play/record elapsed time, program recording end time, various messages, etc.

DVD operation

- CD mode indicator** 18
 - Lights when CD mode is on.
- DVD selector indicator**
 - Lights when DVD is selected.
- Operation status of DVD section**
 - Displays play status graphically.
 - Rotating: playing
 - Stopped: paused
 - Blinking: Standby to resume play (→ 17, Stop)
 - Numeric indicator lights corresponding to disc tray number.
- DTS indicator**
- Progressive video indicator** 17
- Dolby Digital indicator**



- Down mix indicator** 42
- HDCD indicator** 15
- Play sequence indicator**
 - CD mode indicator + RND:** During all disc random play. 21
 - RND:** During random play. 21
 - ↺:** During repeat 19
 - A↔B:** During A-B repeat 25
- Title/Group/Playlist/Chapter/Track/Program display**








VHS operation

- VHS selector indicator**
 - Lights when the selector is in VHS mode.
- Operation status of VHS section**
 - Lights when a video cassette is inserted.
 - Blinks when recording or timer recording is attempted with no video cassette inserted.
 - Displays play status graphically.
 - Rotating: playing
 - Stopped: paused
- Recording indicator** 30
- Repeat playback indicator** 29
- Tape speed indicator** 30
- Timer program recording indicator** 32
- Channel display**



Tuner operation

- Radio broadcast display** 40
 - MONO:** Forced monaural
 - ST:** Stereo
 - TUNED:** Receiving radio signal
- Band display**

Logo	Disc	Indication in operating instructions	Remarks	
	DVD-RAM	RAM	Recorded using Version 1.1 of the Video Recording Format (a unified video recording standard).	<ul style="list-style-type: none"> Recorded with DVD video recorders, DVD video cameras, personal computers, etc. Remove discs from their cartridges before use.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard Ver 1.0.	<ul style="list-style-type: none"> Recorded with Panasonic DVD-Video recorders. To play JPEG files, select "Play as Data Disc" in Other Menu (→ 25).
	DVD-Audio	DVD-A	—	
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" in Other Menu (→ 25).	
	DVD-Video	DVD-V	—	
	DVD-R (DVD-Video)/ DVD-RW (DVD-Video)		Discs recorded and finalized* on DVD video recorders or DVD video cameras.	
—	+R (Video)/ +RW (Video)			
	Video CD	VCD	—	
	SVCD		Conforming to IEC62107	
	CD	CD	<p>This unit is compatible with HDCD, but does not support the Peak Extend function. (A function which expands the dynamic range of high level signals) HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs.</p> <ul style="list-style-type: none"> During HDCD play, "HDCD" lights on the unit's display. 	
—	CD-R CD-RW	WMA MP3 JPEG CD VCD	<ul style="list-style-type: none"> This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize* the disc after recording. HighMAT™ discs WMA, MP3 or JPEG files only. To play without using the HighMAT™ function, select "Play as Data Disc" in Other Menu (→ 25). WMA This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates). 	

*A process that allows play on compatible equipment.


• It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.

Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so play may not be possible.

Discs that cannot be played

PAL discs (except DVD-Audio), DVD-ROM, CD-ROM, CDV, CD-G, SACD, Divx Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

	HighMAT and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
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Disc handling

To prevent damage

Do not;

- load more than one disc per tray.
- close the drawer by hand.

To clean discs

Wipe with a damp cloth and then wipe dry.



Handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rented discs etc).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.



Turn on the television and select the appropriate video input for the DVD.

1 Put the remote control in DVD mode.

DVD

2 Turn on the unit.

POWER

⏻/I

3 Select "DVD/CD".

INPUT SELECTOR

4 Select the disc tray.

DISC
1 2 3 4 5

5 Open the disc tray and load the disc.

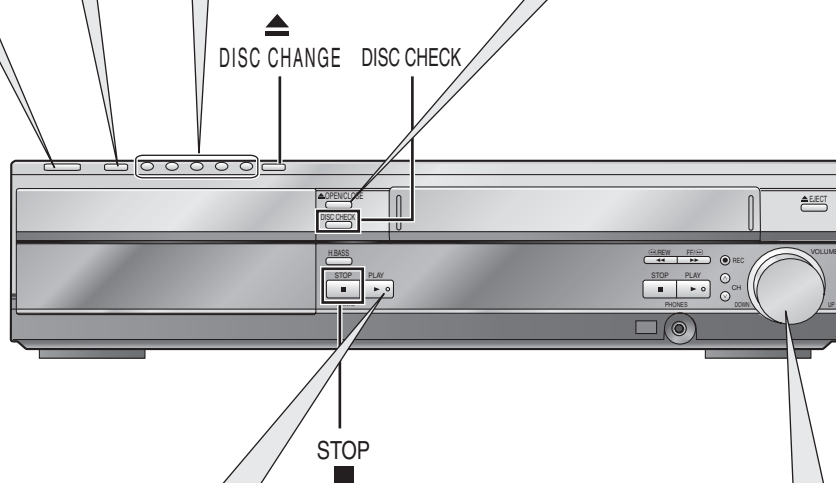
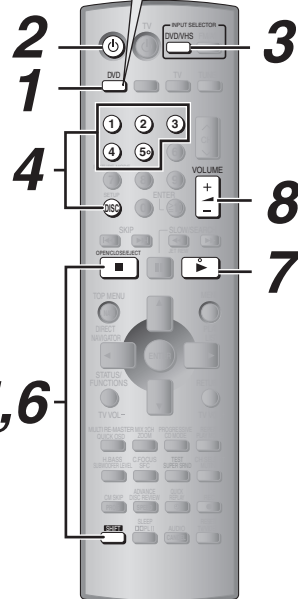
▲ OPEN/CLOSE

- Load double-sided discs so the label for the side you want to play is facing up.

6 Close the disc tray.

▲ OPEN/CLOSE

- To load discs on the other trays, repeat steps 4–6.



7 Start play.

PLAY

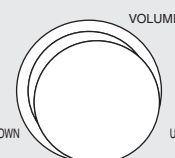
- Press [■] to stop play.

8 Adjust the volume.

—dB ▲ 0dB

(Minimum) (Maximum)

Volume may be lower when playing DVD-Video than when playing other discs or during television broadcasts. Reduce the volume before playing other sources or returning to the television so volume doesn't increase suddenly.



Using main unit

Checking the disc trays

DISC CHECK

All trays except the tray in play open without interrupting play. While stopped, all trays will open.

- Press [DISC CHECK] again to close the trays.
- Do not pull out the trays, remove or insert discs during the disc check.

Note

- When "Press PLAY to resume play" is displayed, this position is memorized even after turning off the unit, changing the source. (Power off resume)
- Total title number may not be displayed properly on +R/+RW.

If you are experiencing problems, refer to troubleshooting (→ 45–47).

Changing the discs during play

DISC CHANGE

You can change the other discs without interrupting play.

- After selecting the disc tray, press [▲ DISC CHANGE] to close the tray.

DISC
1 2 3 4 5

DVD

Numbered
buttons

DISC

◀◀ ▶▶

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• Display... are displayed. Pres...
you find... your television

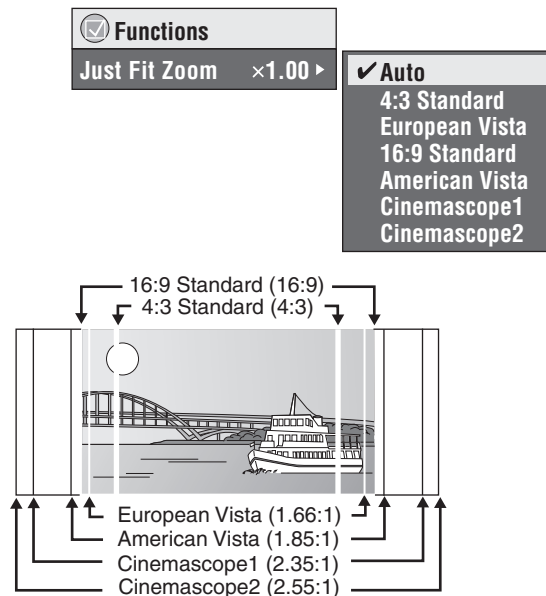


Changing the zoom ratio (Zoom)

DVD-A (Motion picture part) **RAM** **DVD-V** **VCD**

Expands the letterbox picture to fit the screen.

Press **[ZOOM]** several times to select the preset aspect ratio (Just Fit Zoom) or "Auto".



Fine adjustments (Manual Zoom)

After selecting the preset aspect ratio or "Auto", press **[◀ ▶]**.

–from $\times 1.00$ to $\times 1.60$ (in 0.01 units)

–from $\times 1.60$ to $\times 2.00$ (in 0.02 units)

• Press and hold **[◀ ▶]** to alter faster.



Changing soundtracks (Audio)

DVD-A **DVD-V** (with multiple soundtracks) **RAM** **VCD**

Changes the soundtrack.

Press **[SHIFT]+[AUDIO]** several times to select the soundtrack.



RAM **VCD**

You can use this button to select "L", "R" or "LR".

DVD-V (Karaoke discs)

Press **[◀ ▶]** to select "On" or "Off" of vocals.

Read the discs instructions for details.

Signal type/data

LPCM/PPCM/□□ Digital/DTS/MPEG: Signal type

kHz (Sampling frequency)/bit/ch (Number of channels)

Example:

3/2 .1ch

.1: Low frequency effect
(not displayed if there is no signal)

0: No surround

1: Mono surround

2: Stereo surround (left/right)

1: Center

2: Front left+Front right

3: Front left+Front right+Center



Repeat play

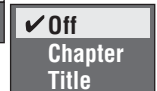
(Only when the elapsed play time can be displayed)

[JPEG]: Works with all JPEG content.)

During play

Press **[SHIFT]+[REPEAT]** several times to select an item to be repeated.

e.g. **DVD-V**



RAM PG (Program)→Disc→Off

• During play list play: Scene→PL (Playlist)→Off

DVD-A Track→Group*→Off

DVD-V Chapter→Title*→Off

VCD **CD** Track→Disc→Off

• When CD Mode is on: Track→Disc→All CD's→Off

• When CD Mode is on, during program and random play:
Track→All CD's→Off

WMA **MP3** Content→Group*→Off

• When CD Mode is on: Content→Group→All CD's→Off

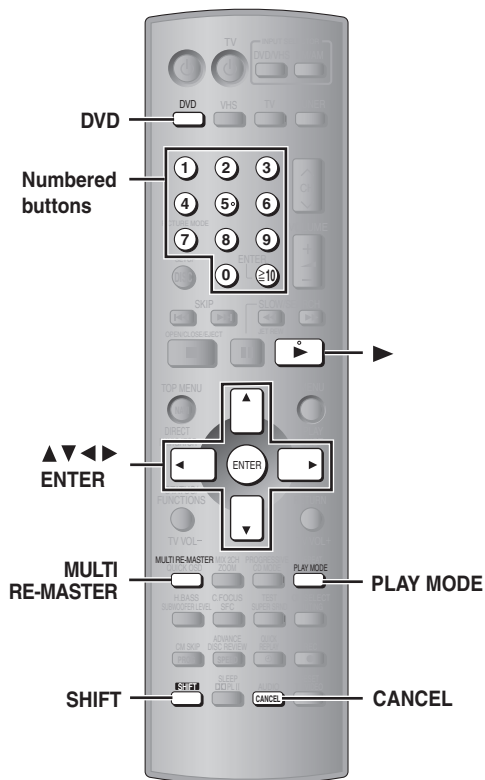
• When CD Mode is on, during program and random play:
Content→All CD's→Off

JPEG Group*→Off

* "All" is displayed, program and random play.



DVD



DVD

REPEAT
PLAY MODE

Program/Random play

1 While stopped, press [PLAY MODE].

Each time you press [PLAY MODE] while stopped:

Program —————> Random
|----- off (Normal play) -----|

■ Program play

When CD Mode is off

DVD-A DVD-V VCD CD WMA MP3 JPEG

You can program all the items on a disc in the play position.

When CD Mode is on

VCD CD WMA MP3

You can program all the items on all the discs.

■ Random play

When CD Mode is off

VCD CD

You can play all the items on a disc in the play position in random order.

DVD-A DVD-V WMA MP3 JPEG

You can play selected item on a disc in the play position in random order.

When CD Mode is on

VCD CD WMA MP3

You can play all the items on all the discs in random order.

To exit

Press [PLAY MODE] several times while stopped.

Note

- The program is cleared when you switch the unit to standby, select another source, or move the disc out of the play position.

• DVD-A

Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons to play the bonus group. Refer also to the disc's jacket.

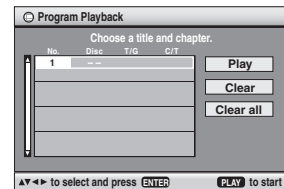
■ Program play (up to 32 items)

■ When CD Mode is off (→ 18)

DVD-A DVD-V VCD CD WMA MP3 JPEG

2 Press the numbered buttons to select a group or title (**WMA MP3 JPEG** then press [ENTER]).

e.g. **DVD-V**



- To select a 2-digit number

e.g. 23:[≥10] → [2] → [3]

WMA MP3 JPEG [2] → [3] → [ENTER]

- **VCD CD** This step is unnecessary.

3 Press the numbered buttons to select a chapter or track (**WMA MP3 JPEG** then press [ENTER]).

Disc No.



e.g. **CD**

Track No. Program No.

- Repeat steps 2 and 3 to program other items.

4 Press [▶] (play).

■ When CD Mode is on (→ 18)

VCD CD WMA MP3

2 Press the numbered buttons to select a disc.

3 Press the numbered buttons to select the items (**WMA MP3** then press [ENTER]).

- To select a 2-digit number

e.g. 23:[≥10] → [2] → [3]

WMA MP3 [2] → [3] → [ENTER]

- Repeat steps 2 and 3 to program other items.

4 Press [▶] (play).

To select an item using the cursor buttons

Press [ENTER] and [▲ ▼] to select an item, then press [ENTER] again to register.

To change the selected program

- 1 Press [▲ ▼] to select an item.
- 2 Repeat step 2 and 3.

To clear the selected item,

- 1 Press [▲ ▼] to select an item.
- 2 Press [CANCEL] (or press [▲ ▼ ◀ ▶] to select "Clear" and press [ENTER]).

To clear the whole program

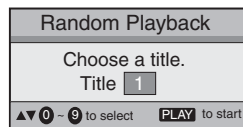
Select "Clear all" with [▲ ▼ ◀ ▶] and press [ENTER]. The whole program is also cleared when the disc is moved out of the play position, the unit is turned off or another source is selected.

■ Random play**■ When CD Mode is off (→ 18)**

DVD-A **DVD-V** **VCD** **CD** **WMA** **MP3** **JPEG**

2 Press the numbered buttons to select a group or a title.

e.g. **DVD-V**



- **VCD** **CD** This step is unnecessary.

DVD-A

- To enter all groups, press [◀ ▶] to select "All" and press [ENTER].
- To deselect a group, press the numbered buttons corresponding to the group you want to clear.

3 Press [▶] (play).

■ When CD Mode is on (→ 18)

VCD **CD** **WMA** **MP3**

2 Press [▶] (play).

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"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.



RAM **DVD-V** (Discs recorded with 48 kHz only)

DVD-A (Discs recorded with 44.1 kHz and 48 kHz only)

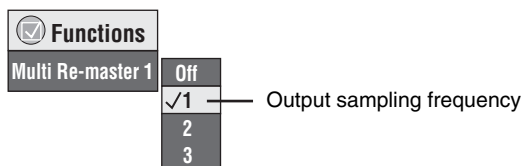
VCD **CD**

- During 2ch output of these discs, this feature gives you a more natural sound by adding the higher frequency signals not recorded on the disc, for example, playing DVD-Video recorded with 48 kHz at 96 kHz. (Sampling frequency → below)
- During multi-channel output of these discs, this feature reproduces the frequencies lost during recording to give you a sound closer to the original.

WMA **MP3** (Disc recording is other than 8 kHz, 16 kHz, 32 kHz)

This feature reproduces the higher frequencies lost during recording to give you a sound closer to the original.

1 Press [SHIFT]+[MULTI RE-MASTER] several times to select "1" "2" or "3".



Setting	DVD-A DVD-V CD (LPCM/PPCM) Type of music	Other discs Effect level
1	High tempo (e.g., pops and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
Off	Off	Off

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.



WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.



g the submenu

the navigation menu is displayed

s [STATUS/FUNCTIONS].

s [▲ ▼] to select an item and press

ER].

Groups and contents

Contents only

Groups only

Thumbnail images **JPEG**

To go to next group **WMA** **MP3**

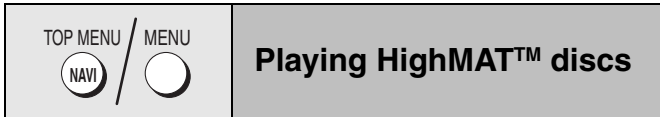
To go to previous group **WMA** **MP3**

WMA/MP3 and JPEG

WMA/MP3 only

JPEG only

To switch between guide messages and the
time indicator
title (→ see below)



WMA MP3 JPEG

- 1 Press [TOP MENU].
- 2 Press [\blacktriangle \blacktriangledown \blacktriangleleft \blacktriangleright] to select the item, then press [ENTER].

e.g.



Menu: Takes you to the next menu which shows play lists or another menu.

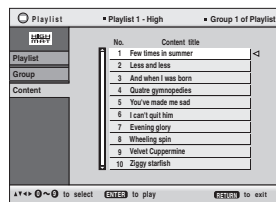
Play list: Play starts.

- To change the menu background Press [STATUS/FUNCTIONS]. The background changes to the one recorded on the disc.
- To exit the screen Press [TOP MENU].

Selecting from the list

- 1 During play Press [MENU].
- 2 Press [\blacktriangleleft] then [\blacktriangle \blacktriangledown] to switch among "Playlist", "Group" and "Content" lists.
- 3 Press [\blacktriangleright] (cursor) then [\blacktriangle \blacktriangledown] to select an item and press [ENTER].

- To exit the screen Press [MENU].



Tips for making WMA/MP3 and JPEG discs (For CD-R/CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.
- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).

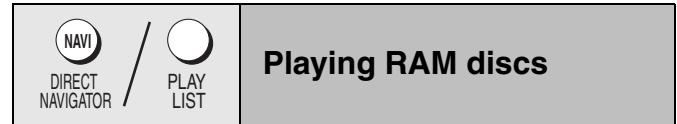
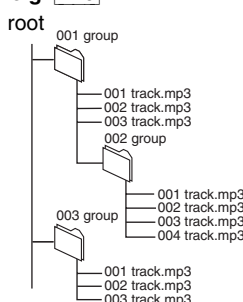
Files must have the extension:

“.WMA” or “.wma”

“.MP3” or “.mp3”

“.JPG”, “.jpg”, “.JPEG” or “.jpeg”

e.g. MP3

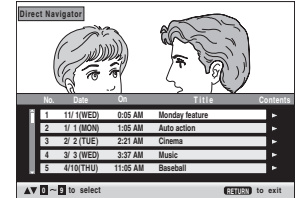


RAM

- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, play lists and disc titles.

Playing the programs

- 1 Press [DIRECT NAVIGATOR].



- 2 Press [\blacktriangle \blacktriangledown] or the numbered buttons to select the program.

- To select a 2-digit number

e.g. 23: [≥ 10] \rightarrow [2] \rightarrow [3]

- Press [\blacktriangleright] (cursor) to show the contents of the program.

- To exit the screen Press [DIRECT NAVIGATOR].

Playing a play list

(Only when the disc contains a play list)

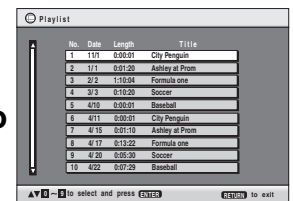
- 1 Press [PLAY LIST].
- 2 Press [\blacktriangle \blacktriangledown] or the numbered buttons to select the play list.

- To select a 2-digit number

e.g. 23: [≥ 10] \rightarrow [2] \rightarrow [3]

- 3 Press [ENTER].

- To exit the screen Press [MENU].



WMA

- You cannot play WMA files that are copy protected.
- This unit is not compatible with Multiple Bit Rate (MBR).

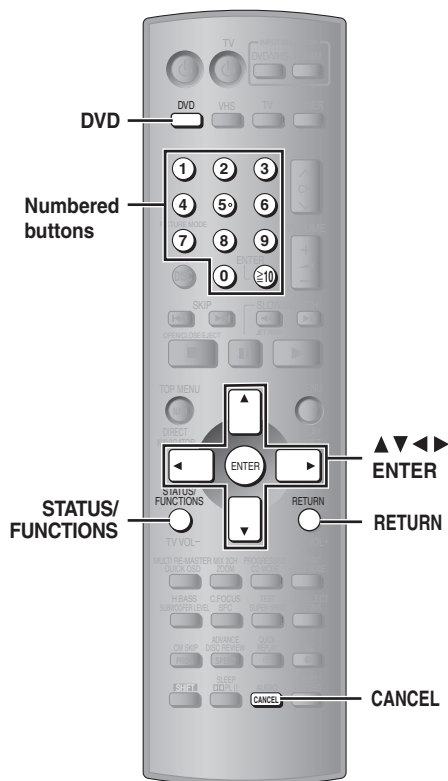
MP3

- This unit is not compatible with ID3 tags.
- Compatible sampling rate: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG

- To view JPEG files on this unit:
 - Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture un-viewable.
 - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.





Items shown differ depending on the type of disc.

Main menus

Program Group Title Chapter Track Playlist Content	To start from a specific item
Time * Except +R/+RW	To skip incrementally or decrementally* (Time Slip for play only) 1 Press [ENTER] twice to show Time Slip indicator. 2 Press [▲ ▼] to enter the time and press [ENTER]. • Press and hold [▲ ▼] to alter faster. To start from a specific time* (Time Search) To change remaining/elapsed time display
Audio	(→ 19) To display the current bitrate or sampling frequency
Still Picture	To switch still picture
Thumbnail	To show thumbnail images
Subtitle	To display/clear the subtitles Press [▲ ▼] to select "On" or "Off". To display a desired subtitle language After selecting the "On", Press [▲ ▼] several times to select the desired subtitle language. • On +R/+RW, a subtitle number may be shown for subtitles that are not displayed.
Marker (VR)	To recall a marker recorded on DVD-Video recorders To recall a marker: [▲ ▼] → [ENTER]
Angle	(with multiple angles) To select the angle
Rotate Picture	To rotate pictures
Slideshow	To turn on/off slideshow To change the slideshow timing (0–30 sec)
Other settings	(→ 25)

1	STATUS/ FUNCTIONS	Press once.
2	Select Go to the next menu Register Return to the previous menu	Select the menu.
3	 Select Register ENTER 1 2 3 4 5 6 7 8 9 0 ENTER 10 or more	Make the settings.
4	RETURN	Press to exit.

Other settings

Play Speed	RAM DVD-V
	To change play speed – from $\times 0.6$ to $\times 1.4$ (in 0.1 units) • After you change the speed – Output is in stereo. – Sampling frequency of 96 kHz is converted to 48 kHz.

■ Play Menu

(Only when the elapsed play time can be displayed)

JPEG: Works with all JPEG content.)

Repeat	(→ 19)
A-B Repeat	Except JPEG RAM (still picture part) To repeat a specified section Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel.
Marker	To mark up to 5 positions to play again Press [ENTER] (The unit is now ready to accept markers.) To mark a position: [ENTER] (at the desired point) To mark another position: [◀▶] → [ENTER] To recall a marker: [◀▶] → [ENTER] To erase a marker: [◀▶] → [CANCEL] • This feature doesn't work during program and random play.
Advanced Disc Review	(Reviewing title to play (Advanced Disc Review) → 18)

■ Picture Menu

Picture Mode	Normal Cinema1 : Mellow images and enhances detail in dark scenes. Cinema2 : Sharpens images and enhances detail in dark scenes. Animation Dynamic User (Press [ENTER] to select "Picture Adjustment") (→ below)
	Picture Adjustment Contrast Brightness Sharpness Color Gamma (Adjusts the brightness of dark parts.) Depth Enhancer Reduce the rough noise in the background to give a greater feeling of depth.
Video Output Mode	480i (Interlace) ↔ 480p (Progressive)
Transfer Mode	If you have chosen "480p" (→ 19), the method of conversion for progressive scan will suit the type of material. Auto1 (normal): For normal viewing. Auto2 : For viewing on a large screen. Auto1, Auto2, and User are available for progressive scan. Video : For viewing on a large screen.

■ Audio Menu

Dolby Pro Logic II	(→ 41)
Dialogue Enhancer	To make the dialogue in movies easier to hear DVD-V (Dolby Digital, DTS, MPEG, 3-channel or over, with the dialogue recorded in the center channel) On ↔ Off
Multi Re-master	(→ 21)
Sound Enhancement	Enhances audio output to produce a warm hall-like sound. You can enjoy higher quality audio by adding higher frequency signals not recorded on the disc. On ↔ Off

■ Display Menu

Information	JPEG : Off, Date, Details
Subtitle Position	0 to –60 (in 2 units)
Subtitle Brightness	Auto, 0 to –7 Auto : Subtitle gets bright when picture is dark, and vice versa.
Just Fit Zoom	(→ 19)
Manual Zoom	(→ 19)
Bit Rate Display	RAM DVD-V On ↔ Off
GUI See-through	Off ↔ On ↑ Auto
GUI Brightness	0 to –7

...e, subtitle
(sc).

...ion and preference.

[16:9]

Regular aspect television (4:3)
The top and bottom of the widescreen
picture are cut off so it fills the
screen (unless prohibited by
the disc).



Regular aspect television (4:3)
Widescreen picture is shown
in the letterbox style.



Widescreen television (16:9)

TV Type QUICK SETUP

Select to suit the type of television.

[Standard (Direct View TV)]

[CRT Projector]

[LCD TV/Projector]

[Projection TV]

[Plasma TV]

Time Delay

When connected to a Plasma display, adjust if you notice the audio is out of the sync with the video.

[0ms] [20ms] [40ms] [60ms] [80ms] [100ms]

Still Mode

Specify the type of picture shown when paused.

[Automatic] [Field] [Frame]

Automatic	Still picture is displayed without being blurred or at high quality.
Field	The picture is not blurred, but picture quality is lower.
Frame	Overall quality is high, but the picture may appear blurred.

exit.

...you switch the unit to standby.
...during playback, playback will stop
...not work.
...factory preset.

Black Level Control

Change the black level of the picture if you connected a television through the COMPONENT VIDEO OUT terminals.

[Lighter] [Darker]

Lighter	When connected through VIDEO OUT or S-VIDEO OUT.
Darker	When connected through COMPONENT VIDEO OUT.

“Audio” tab

Dynamic Range Compression

[Off] [On]

On	Adjusts for clarity even when the volume is low through compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital)
----	---

Speaker Setting (→below)

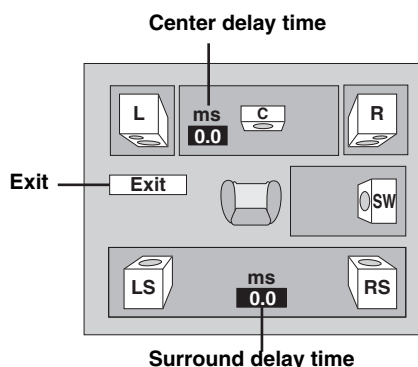
Set the delay time for your center and surround speakers.

- Center
0.0/1.0/2.0/3.0/4.0/5.0 ms
- Surround (L/R)
0.0/5.0/10.0/15.0 ms

Changing the delay time (Speaker Setting)

(Effective when playing multi-channel audio)

For optimum listening with 5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position. If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.



- 1 Press [▲ ▼] to select the delay time box and press [ENTER].
- 2 Press [▲ ▼] to adjust the delay time and press [ENTER].

To finish the speaker setting

Press [◀] to select “Exit” and press [ENTER].

“Display” tab

Menu Language

[English] [Français] [Español]

On-Screen Messages

[On] [Off]

“Others” tab

QUICK SETUP

[Yes] [No]

Re-initialize Setting

This returns all values in the Setup menus to the default settings.

[Yes] [No]

Yes	The password screen is shown if “Ratings” (→ 26) are set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again.
-----	---

If either distance (a) or (b) is less than (c), find the difference in the relevant table and change to the recommended setting.



a Center speaker

Difference	Setting
Approx. 30 cm (1 foot)	1.0 ms
Approx. 60 cm (2 feet)	2.0 ms
Approx. 90 cm (3 feet)	3.0 ms
Approx. 120 cm (4 feet)	4.0 ms
Approx. 150 cm (5 feet)	5.0 ms

b Surround speakers

Difference	Setting
Approx. 150 cm (5 feet)	5.0 ms
Approx. 300 cm (10 feet)	10.0 ms
Approx. 450 cm (15 feet)	15.0 ms

Turn on the television and select the appropriate video input for the VHS.

1 Put the remote control in VHS mode.



2 Turn on the unit.

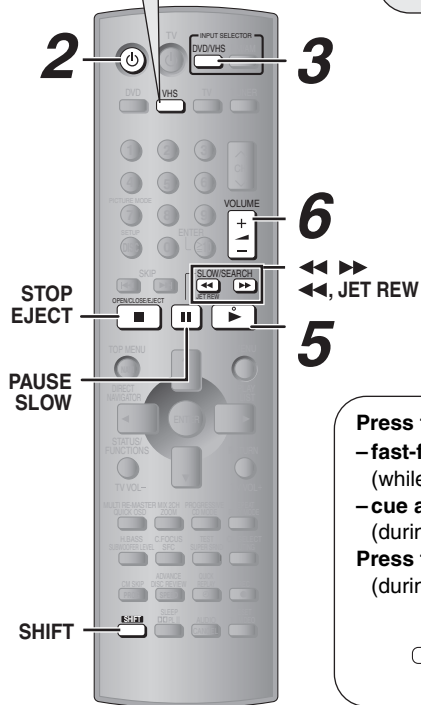


3 Select "VHS".

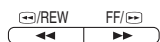


4 Insert a tape.

Play starts automatically if you insert a prerecorded tape or one that has been removed.



Press to
–fast-forward and rewind.
(while stopped)
–cue and review.
(during play)
Press twice to Jet search.
(during play)



Stop

STOP



Stop



Pause



• Press [▶] (play)

Slow

Press and hold

• There is



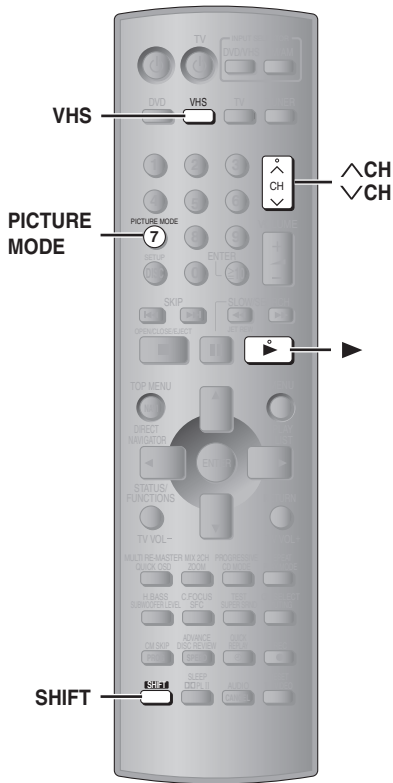
Fast-forward and rewind
(while stopped)

Cue and review
(during play)



Note

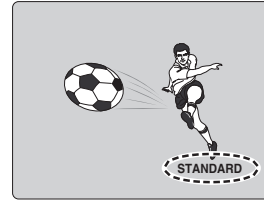
- Pause stop
- Play after
- The
- rev
- t



Picture mode

Changes the picture quality to suit the material you are playing.

Press [SHIFT]+[PICTURE MODE].



Each time you do this:

STANDARD: for recordings of television

DYNAMIC: clear, vivid pictures for s

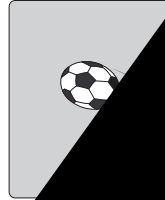
SOFT: for prerecorded tapes

Repeat

Plays a program repeatedly.

Press and hold [REPEAT].

"R▶" / "R" appears on the screen.



After the program



Manual tracking

This unit has an automatic digital tracking control feature that usually makes tracking adjustments for you, but you may need to do it manually, such as if noise appears on a tape recorded on other equipment.

During play

Press [^ CH] or [v CH].

Repeat until the noise disappears.

To return to automatic digital tracking control

Press [^ CH] and [v CH] at the same time.

To remove the noise from a paused picture

Start slow play, then adjust the tracking.

Note

This may not be effective on some tapes.



Vertical lock

Adjusts the vertical hold to keep the picture steady.

While paused

Press [^ CH] or [v CH].

Repeat until the jiggling

To return to the

Press [^ CH] and

Note

This may not be effective on some tapes.

Using another source while recording

You can watch and listen to other content when the unit is in timer recording standby or during VHS recording.

■ Television (→ 12)

- 1 During recording
Press [TV] to put the remote control in TV mode.
- 2 Press [TV/VIDEO] then select the channel with the numbered buttons, [^ CH] or [v CH].

■ DVD (→ 16)

- 1 During recording
Press [DVD] to put the remote control in DVD mode.
- 2 Press [DVD/VHS] to select "DVD/CD".
- 3 Insert a disc and start play.

■ Radio (→ 40)

- 1 During recording
Press [TUNER] to put the remote control in TUNER mode.
- 2 Press [FM/AM] to select the radio band.
- 3 Select the radio channel with the numbered buttons, [^ CH] or [v CH].

Note

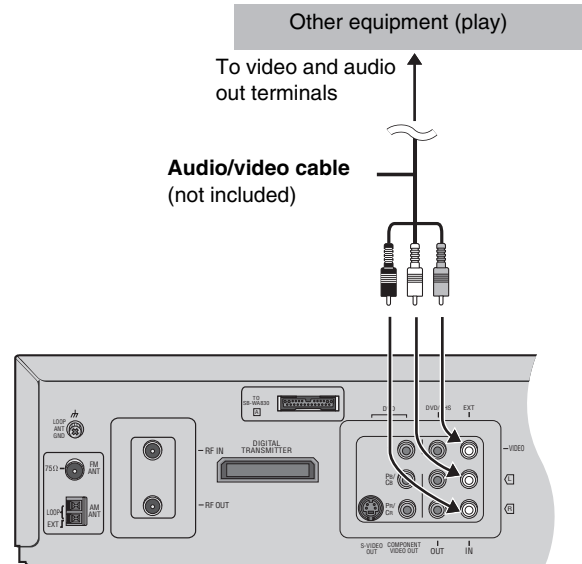
When you want to operate the VHS section again, be sure to press [VHS] to put the remote control in VHS mode.

Recording from other equipment

You can record from other video equipment. (video cassette recorder, camera, etc.)

Preparation

- Connect the equipment to this unit's input terminals.
– Turn the unit off before making connections.
– If audio output on the other equipment is monaural, use a stereo-monaural conversion cable (not included).
- Insert the tape, ensuring its tab is in place and find the place to start recording.



- 1 Press [^ CH] or [v CH] to select "AV" channel.



- 2 Press [▶] (play) to find the place to start recording.
- 3 Press [II], then press [SHIFT]+[● REC] to put the unit in recording standby mode.
- 4 Press [SPEED] to select the tape speed.
SP → EP → VP
↑
- 5 Start play on the other equipment.
- 6 Press [II] when you want to start recording.

To stop
Press [■].

- To make a timer program to record from other equipment (→ 32)





Timer recording

VHS

1

The timer-programming screen appears.

	DATE	CH	ON	OFF	1/2
1	27WE	2	8:02PM	9:30PM	SP
2	SU-SA125		10:30AM	11:00AM	
3	SU	14	3:00PM	4:00PM	EP
4	19TU	5	10:15PM	11:30PM	VP
5	28TH	AV	8:02PM	9:30PM	SP
6	30SA	4	7:10PM	7:55PM	VP
7	----	--	----	----	--
8	----	--	----	----	--

PROG.:ENTER END:MENU

2

3

The date changes as follows:

→ Current date

↓ ↑

Next day up to one month later minus one day

↓ ↑

Weekly timer: SU-SA → MO-SA → MO-FR

↓ ↑

↳ Daily timer: SU → MO → TU → WE → TH → FR → SA

4

Select "AV" when recording from other equipment (→ 31).

5

- 6

- 7

$$SP \rightarrow EP \rightarrow VP \rightarrow A$$

↑

※Auto SP/EP change function (→ 33)

- 8

Select a category.

Press **[▶]** (cursor) to select a category column. Press **[▲ ▼]** to enter the category selection menu. Then select a category with **[▲ ▼ ◀ ▶]**, and confirm with **[MENU]**.

You can also set and change the category in the navigator list (→ 35).

Repeat steps 2 to 8 to make further timer programs.

- c**

“⌚” lights on the unit’s display.



- 1

The timer recording works whether the unit is on or not, so you can play DVDs or listen to the radio (→ 31). Switch the unit to standby if you are finished.

To cancel the selected line

Press [SHIFT]+[RESET].

To release the unit from timer recording standby

Press [⌂].

To stop recording

Press [⌚].

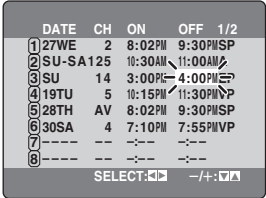
To check, correct, and cancel timer programs

■ To check a program

Press [PROG].
The timer-programming screen appears.

■ To correct a program

While the timer programming screen is on the television,
1 Press [PROG] to highlight the program you want to correct and press [ENTER].
2 Select the item with [◀ ▶] and correct it with [▲ ▼].



■ To cancel a program

While the timer programming screen is on the television,
1 Press [PROG] to highlight the program you want to cancel.
2 Press [CANCEL].

To clear the timer programming screen

Press [MENU].

Auto SP/EP change

The unit switches tape speed to EP if it determines there is not enough tape to record the entire program in SP mode. The change may start at the beginning of the recording or part way through, depending on the remaining tape.

Before using this function, set the length of the tape you are using (→ 38). It may not work correctly if you use tapes with irregular lengths.

Example program combination

1st program (30 min.)	2nd program (60 min.)	
Example program combination		
30 min. at SP	15 min. at SP	45 min. at EP (when using tape)

Note

This function does not guarantee recording of the

the “JET

- 3 Press [▲ ▼] to select “JET NAVIGATOR” and press [◀ ▶] to change the setting to “ON”.

OPTION		1/2
OSD	• ON	OFF
TAPE SELECT		
• T120	T160	T180
BLUE BACK	• ON	OFF
JET NAVIGATOR	• ON	OFF
DELETE NAVIDATA	• NO	YES
JET SEARCH	x27	•x35
SELECT	:◀ ▶ - / + : ▶	
END	:MENU	

- 4 Press [▲ ▼] to select “TAPE SELECT” and press [◀ ▶] to set the length of the tape you are using.

T120: T30, T60, T90, T120 tapes

T160: T140, T160 tapes

T180: T180 tapes

- 5 Record programs (→ pages 30–32).
The unit makes the list as you record.

Remember Press [VHS] first.

s are in

ram
ted.

gory

STATUS/
FUNCTIONS

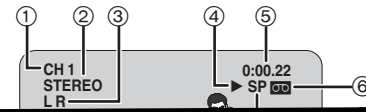


On-screen display

To see these displays, set the OSD item in the OPTION menu to ON.

Press [STATUS/FUNCTIONS].

The time and operation details appear on the screen for about 5 seconds.



playback

CHANNEL SET

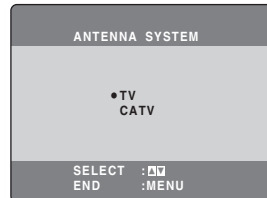
The unit tunes automatically after you plug it in and turn it on for the first time (→ 11, Plug-in Auto Tuning), but you can start the process again if necessary.

- Make sure you have tuned to a television channel. This does not work if you have selected “AV” channel.

- 1 While VHS MENU is displayed (→ 36)
Press [▲ ▼] to select “CHANNEL SET” and press [ENTER].

ANTENNA SYSTEM

- 2 Press [▲ ▼] to select “ANTENNA SYSTEM” and press [ENTER].
- 3 Press [▲ ▼] to select “TV” or “CATV” to suit the type of antenna you are using.



Channels are set corresponding to the antenna system you select. This is set automatically when you do Plug-in Auto Tuning.

To exit the settings screen

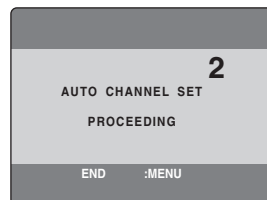
Press [MENU] until the screen disappears.

AUTO

Auto tuning searches for TV stations and memorizes every tuned program position. Other program positions are skipped. (Channel range → right)

- 2 Press [▲ ▼] to select “AUTO” and press [ENTER].

Auto tuning starts. It takes three or more minutes to complete.



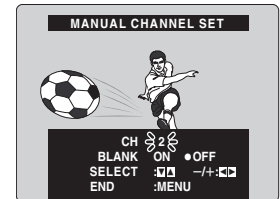
To stop partway through

Press [MENU].

MANUAL

You can manually preset channels that are skipped when using the auto channel setting, and manually skip channels that are preset.

- 2 Press [▲ ▼] to select “MANUAL” and press [ENTER].
- 3 Press [▲ ▼] to select “CH” and [◀ ▶] to select the channel.
- 4 Press [▲ ▼] to select “BLANK” and [◀ ▶] to select “ON” or “OFF”.



To exit the settings screen

Press [MENU] until the screen disappears.

Channel range

•TV mode

Band	Airwaves
VHF	2–13
UHF	14–69

•CATV mode

Band	Cable
VHF	2–13
CATV LOW BAND	95–99
CATV MID/SUPER BAND	14–36
CATV HYPER BAND	37–65
ULTRA BAND	66–94
	100–125
SPECIAL CATV CHANNEL	1



VHS

REMOTE CONTROL

Panasonic video cassette recorders use the same remote control system so they may respond unintentionally to a command from this remote control. Change the code on this unit and its remote control (the two must match) if you place another Panasonic video cassette recorder close together.

- Use "1", the factory preset, under normal circumstances.

- 1 While **OPTION** menu is displayed
Press [**▲ ▼**] to select the **"REMOTE CONTROL"**.
- 2 Press [**◀ ▶**] to select the code (1 or 2) and press [**MENU**].
The remote control code on the unit has been set.
- 3 While pressing [**ENTER**] on the remote control, press and hold the numbered button ([1] or [2]) corresponding to the code you selected in step 2.

When the remote control code on the remote is set, "REMOTE" indication (→ below) disappears.

The following is displayed for a few seconds on the main unit when you use a remote control with the different code.



The unit's remote control code

Change its code to match the unit's (→ step 3).



Changing audio

When a stereo and/or SAP broadcast is received, "STEREO" and/or "SAP" appear showing the type of broadcast.

To change the audio

Press [SHIFT]+[AUDIO].

The audio changes as follows:

- When playing a tape:
LR→L→R→Monaural audio track
↑
- While watching the television:
LR→L→R
↑

The table below shows the TV broadcast type, "MTS" settings, and audio recording patterns.

TV broadcast	MTS setting	Audio track		
		Normal (Mono)	Hi-Fi	
			Left	Right
Mono	MAIN or SAP	Mono	Mono	Mono
Stereo	MAIN or SAP	L+R (Mixed)	Left	Right
Mono and SAP	MAIN	Mono	Mono	Mono
	SAP	Mono	Mono	SAP
Stereo and SAP	MAIN	L+R (Mixed)	Left	Right
	SAP	L+R (Mixed)	L+R (Mixed)	SAP

Be sure that "MTS" is set to "MAIN" or "SAP" to record on the Hi-Fi audio tracks.

Note

- Switch to "MONO" for viewing or recording if a stereo or SAP broadcast is impaired by poor reception.
- To resume stereophonic recording, set "MTS" to "MAIN" or "SAP".

Auto bilingual choice function

When you play back recordings of stereo or SAP broadcasts, these audio types are automatically selected. The unit may select a different type if you start play midway through the program. Press [SHIFT]+[AUDIO] to change the type if this occurs.

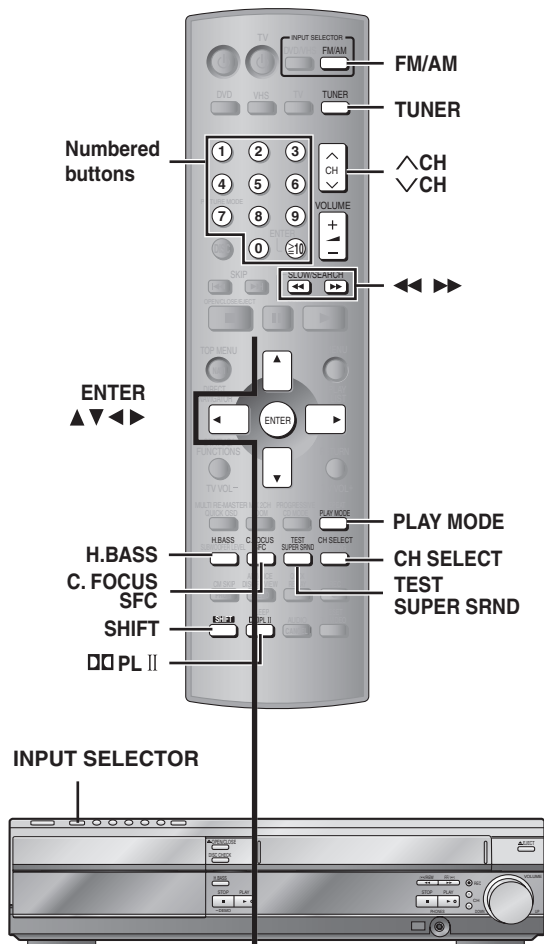
This function does not work if:

- The tape was recorded on a deck without this system.
- The tape is a recording from external equipment.



The radio

Press [TUNER] to put the remote control in TUNER mode.



- 1** Tune to the station (→ above).
- 2** Press [ENTER].
- 3** While “PGM” is blinking on the display
Press the numbered buttons to select a channel.
Alternatively, press [^ CH] or [v CH] then press [ENTER].

The station occupying a channel is erased if another station is preset to that channel.

- 1** Press [FM/AM] to select “FM” or “AM”.
- 2** Press the numbered buttons to select the channel.
Alternatively, press [^ CH] or [v CH].
To select a 2-digit number
e.g. 12: [≥10] → [1] → [2].

When a stereo FM broadcast is being received.

Automatic presetting

Up to 15 stations can each be set in the FM and AM bands.

- 1** Press [FM/AM] to select “FM”.
- 2** Press [◀◀] or [▶▶] to tune to the lowest frequency (“FM 87.9” MHz or “FM 87.5” MHz).
- 3** Press and hold [ENTER].
Release the button when “AUTO” is displayed.
The tuner presets all the stations it can receive into the channels in ascending order.
• “SET OK” is displayed when the stations are set. The last station to be set is then played.
• “ERROR” is displayed when automatic presetting is unsuccessful. Preset the channels manually (→ right).
- 4** Repeat steps 1 to 3 to set the AM bands (the lowest frequency is “AM 520” kHz).

■ If noise is excessive in FM

Press [PLAY MODE] to display “MONO”.

Press [PLAY MODE] again to cancel the mode.

The mode is also canceled when you change the frequency.

■ FM frequency step

Main unit only

The step is factory-set to 0.2 MHz, but you can change it to receive broadcasts allocated in 0.1 MHz steps.

- 1 Press [INPUT SELECTOR] on the main unit to select “FM”.
- 2 Press and hold [INPUT SELECTOR].
After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.
To return to the original step, repeat the above steps.

Note

Any FM/AM frequencies preset in channels will be changed by this procedure. Preset them again.

Manual tuning

- 1** Press [FM/AM] to select “FM” or “AM”.
- 2** Press [◀◀] or [▶▶] to select the frequency.
Press and hold [◀◀] or [▶▶] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

Sound field and sound quality

- When connected with headphones, the following sound field systems cannot be used. (Excluding Sound Field Control)
- You may experience a reduction in sound quality when these sound field systems are used with some sources. If this occurs, turn the sound field system off.



Changes the sound quality.

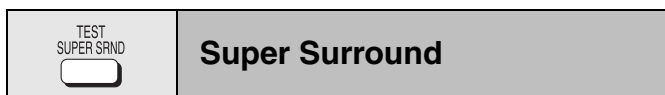
Press [SFC].

Each time you press the button:

- FLAT:** Cancel (no effect is added) (factory preset).
- HEAVY:** Adds punch to rock.
- CLEAR:** Clarifies higher sounds.
- SOFT:** For background music.
- DISCO:** Reverberates sound to make you feel like you are in a disco.
- LIVE:** Makes vocals more alive.
- HALL:** Expands sound to make you feel like you are in a hall.

To check the current setting

Press [SFC].



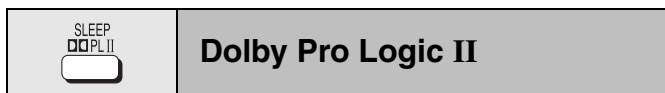
Adds surround effects to stereo sound.

Press [SUPER SRND].

Each time you press the button:

- MUSIC:** Adds surround effects to stereo sources.
- MOVIE:** Use this mode when playing movie software.
- PARTY:** Sound is in stereo regardless of the direction you are facing.
- OFF:** No sound effect.

- This does not work when you are playing multi channel audio.
- You can adjust the volume of the surround speakers to get the best surround effect (→ Right, Speaker level adjustments).
- When Super Surround is on, Dolby Pro Logic II turns off.



Change stereo sound to surround sound.

Dolby Pro Logic II is an advanced decoder that derives 5 channel surround (Left and Right Front, Center, Left and Right Surround) from any stereo program material, whether or not it has been specifically Dolby Surround encoded.

Press [DOLBII].

Each time you press the button:

- Movie:** Movie software, recorded in Dolby Surround.
- Music:** Stereo sources.
- Off:** Cancel.

- This works only in DVD/CD mode.
- "DOLBII" lights when there is effect.
- Dolby Pro Logic II for disc media only.

To cancel

Press [DOLBII] several times.

- This does not work when playing multi-channel audio.

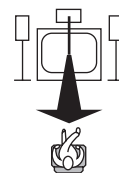
Software encoded with Dolby Surround can be identified with this mark (DVD, CD, Video CD, Laser Disc, Video tape).



(Discs where the dialogue is recorded in the center channel)

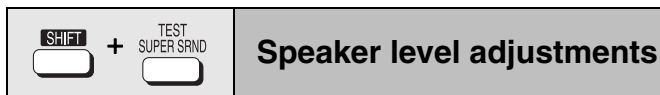
You can make the sound of the center speaker seem like it is coming from within the television.

Press [SHIFT]+[C.FOCUS].



CENTER FOCUS ON ↔ CENTER FOCUS OFF

- This does not work when Super Surround is turned on.
- This will have less effect when Dolby Pro Logic II is turned on.



This is one of the ways to get the appropriate surround effect. Adjust the speaker level to the same level as the front speakers.

- Dolby Digital and DTS: Turn off the other sound field systems.
- Dolby Pro Logic II : Press [DOLBII].

1

While stopped

Press [SHIFT]+[TEST] to output a test signal.

- Lch: Front left
- Cch: Center
- Rch: Front right
- RSch: Right surround
- LSch: Left surround

- There is no output from SW (subwoofer) channel.

2

Press [VOLUME, +] or [–] to set the volume level normally used for listening.

3

Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS: –6 dB to +6 dB
(L, R: Only the balance is adjustable.)

- To adjust the balance of the front speakers
While outputting the test signal, press [◀ ▶].

To stop the test signal

Press [SHIFT]+[TEST] again.

■ To adjust speaker level during play

(Effective when playing multi-channel audio or Dolby Pro Logic II is on.)

1

Press [SHIFT]+[CH SELECT] to select the speaker.

L→C→R→RS→LS→SW
↑

SW: Subwoofer

- You can only adjust SW if the disc includes a subwoofer channel.
- S appears instead of RS and LS on the display when "MUSIC" or "MOVIE" is selected with Super Surround (→ Left, Super Surround). In this case, you can adjust both surround speaker levels at the same time.
- S: –6 dB to +6 dB

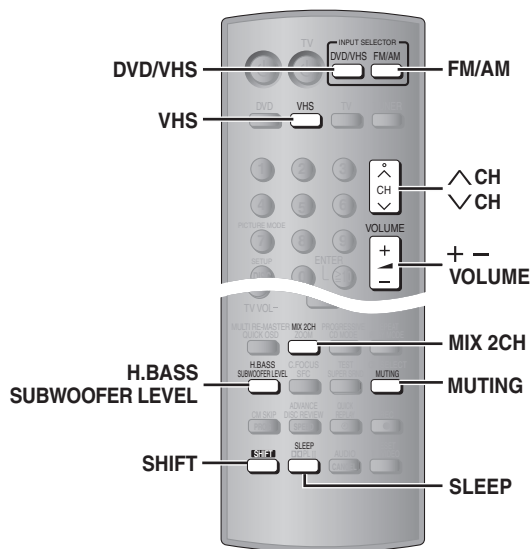
2

Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS, SW: –6 dB to +6 dB
(L, R: Only the balance is adjustable.)

- To adjust the balance of the front speakers
During play, press [◀ ▶].



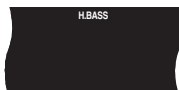


Enhancing the bass sound

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal. The unit automatically selects the most suitable setting according to the type of playing source.

Press [SHIFT]+[H.BASS].

- When DVD-Video or DVD-RAM is selected
H.BASS ON (factory preset) \longleftrightarrow H.BASS OFF
- When another source is selected
H.BASS OFF (factory preset) \longleftrightarrow H.BASS ON



The setting you make is retained, and recalled every time you play the same type of source.

Down-mixing

You can output the down-mixed 2 channel signal when necessary (e.g. when you intend to record 5.1ch sound on other recording equipment).

Press [SHIFT]+[MIX 2CH].



To cancel

Press [SHIFT]+[MIX 2CH] again.

Note

- This works only when you are playing multiple channel signals.
- When "D.MIX" flashes on the display, the disc contains multiple-channel signals that cannot be down-mixed. **DVD-A**

Subwoofer level

You can adjust the amount of bass. The unit automatically selects the most suitable setting according to the type of playing source.

Press [SUBWOOFER LEVEL].



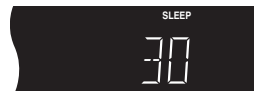
- When DVD-Video or DVD-RAM is selected
SUB W 4 (factory preset) \rightarrow SUB W 1 \rightarrow SUB W 2 \rightarrow SUB W 3
- When another source is selected
SUB W 2 (factory preset) \rightarrow SUB W 3 \rightarrow SUB W 4 \rightarrow SUB W 1

The setting you make is retained, and recalled every time you play the same type of source.

Sleep timer

Turns the unit off after a set time.

Press [SHIFT]+[SLEEP] to select the time (in minutes).



SLEEP 30 \rightarrow SLEEP 60 \rightarrow SLEEP 90
OFF \leftarrow SLEEP 120 \leftarrow

To cancel the timer

Press [SHIFT]+[SLEEP] to select "OFF".

To confirm the remaining time

Press [SHIFT]+[SLEEP] again.

To change the setting

Repeat the procedure from the beginning.

- The VHS's timer program recording functions even when the unit is turned off by the sleep timer.

Muting

Mutes the sound.

Press [MUTING].



- "MUTING" flashes on the unit's display.

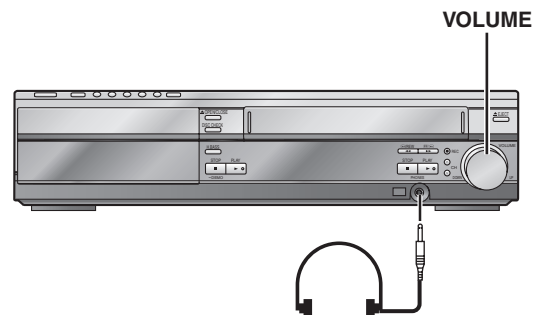
To cancel

- Press [MUTING] again or reduce the volume to minimum (— dB), then raise it to the required level.
- Muting is canceled when you switch the unit to standby or turn up the volume from minimum (— dB).

Using headphones

1 Reduce the volume and connect the headphones (not included).

Headphone plug type: 3.5 mm (1/8") stereo



2 Adjust headphone volume with [VOLUME].

- Audio is automatically switched to stereo (2-channel).

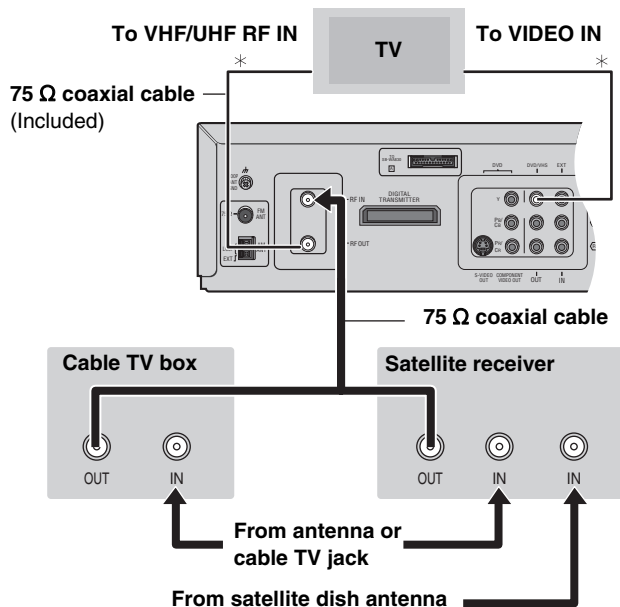
Note

Avoid listening for prolonged periods of time to prevent hearing damage.

- The equipment connections described are examples.
- Peripheral equipment and optional cables sold separately unless otherwise indicated.
- Before connection, turn off all equipment and read the appropriate operating instructions.

Connecting a cable TV box/satellite receiver

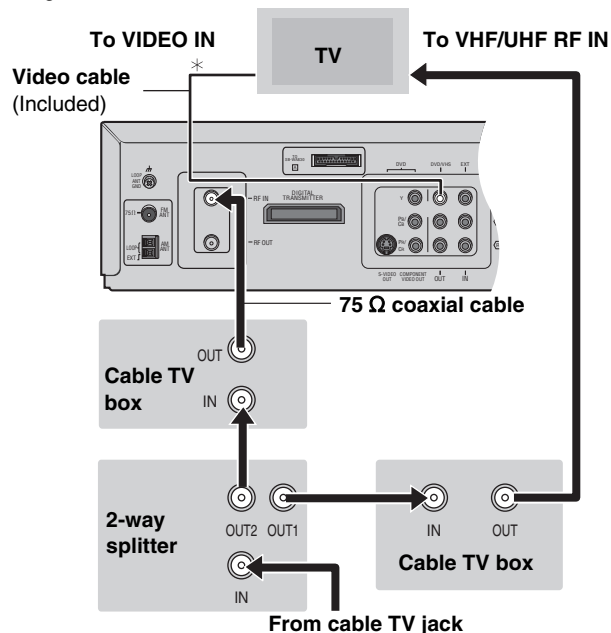
- You need to subscribe to a cable TV or satellite TV service, to enjoy viewing their programming.
- Consult your service provider regarding appropriate cable TV box or satellite receiver.
- Select the applicable input on your television to view the output from your cable TV box/satellite receiver through this unit.
- The signal from the cable TV box or satellite receiver passes through this unit to the television even when this unit is turned off.
- You cannot do a timer recording unless the channel is first selected on the cable TV box or satellite receiver.



Note

When a home satellite system (Dishnetwork/DSS) is connected, auto tuning and auto clock setting may not operate properly. Set the clock manually (→ 36).

- You can record and view simultaneously scrambled and unscrambled channels if connections are made as shown in the diagram below.



* For more information on connections (→ 7)

If the antenna connector doesn't match

Other antenna connections to the unit

Use one of the following connections to suit the antenna lead.

- If your TV has both lead and coaxial VHF terminals, use the lead connection to minimize signal loss.

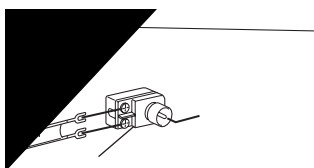
■ A single twin lead

from the antenna
(Flat) Twin lead 300 Ω cable
300–75 Ω transformer (not included)
To this unit's RF IN terminal

■ A twin lead and a coaxial cable

from the antenna
(Flat) Twin lead 300 Ω cable
VHF/UHF band mixer (not included)
(Round) 75 Ω coaxial cable
To this unit's RF IN terminal

■ Two twin leads



Use one of the following connections to suit the antenna terminals on your TV. Refer to the TV's operating instructions.

■ A twin lead and coaxial plug terminal

■ A twin lead terminal

■ Two twin lead terminals

■ Multiple antenna terminals

- Connect to one of ANT terminals, then change the TV's setting as necessary.

Picture incorrect

Picture distorted.	<ul style="list-style-type: none"> ● Ensure that the unit is connected directly to the television, and is not connected through an A/V selector or other equipment. 	7
The television may display incorrectly or colors appear faded.	<ul style="list-style-type: none"> ● The unit and television are using different video systems. Use a multi-system or NTSC television. ● The system used on the disc doesn't match your television. PAL discs cannot be played. This unit converts DVD-Audio recorded in PAL to NTSC for play, however, play may not function properly. 	— —
The picture on the television disappears or stripes appear on the screen.	<ul style="list-style-type: none"> ● Mobile telephone chargers can cause some disturbance. ● If you are using a TV indoor antenna, change to an outdoor antenna. ● The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit. 	— — —

Disc picture incorrect

Picture size doesn't fit the screen.	<ul style="list-style-type: none"> ● Change "TV Aspect" in "Video" tab. ● Change the Zoom setting. 	26 19
Menus not displayed correctly.	<ul style="list-style-type: none"> ● Restore the zoom ratio to $\times 1.00$. ● Set "Subtitle Position" in Display Menu to "0". 	19 25
Auto zoom function does not work well.	<ul style="list-style-type: none"> ● Turn off TV's zoom function. ● Use the other preset aspect ratios or manual adjustment. ● Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc. 	— 19 —

VHS picture incorrect

The picture is noisy or is in black and white. Horizontal bars or lines run down the screen.	<ul style="list-style-type: none"> ● Adjust the tracking. ● Make sure the television's input setting is correct. ● The video heads are dirty: clean them with a head-cleaning cassette. ● The video heads are worn: consult your dealer. ● The tape is old or damaged. ● You cannot correctly play tapes recorded with other systems (e.g., PAL). 	29 — 47 — — —
Picture is distorted when stilled or during slow-motion.	<ul style="list-style-type: none"> ● Some distortion is normal with tapes recorded using VP mode. 	—
The blue back appears during play.	<ul style="list-style-type: none"> ● You are playing a blank or poor quality part of the tape. ● You can damage the unit if you play dirty or damaged tapes and this can cause the blue back to appear. Consult your dealer. 	— —
The picture jiggles.	<ul style="list-style-type: none"> ● Adjust the vertical hold. 	29

Progressive video

There is ghosting when progressive output is on.	<ul style="list-style-type: none"> ● This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output. Change "Video Output Mode" in Picture Menu to "480i". 	25
Pictures not in progressive output.	<ul style="list-style-type: none"> ● If the unit is connected to the television through VIDEO OUT or S-VIDEO OUT output will be interlace. ● Press [SHIFT]+[PROGRESSIVE]. Or select "480p" in "Video Output Mode" in Picture Menu. 	— 17, 25
Closed captions not displayed.	<ul style="list-style-type: none"> ● When progressive output is on, closed captions will not be displayed. 	—



Sound incorrect

Sound distorted.	<ul style="list-style-type: none"> ● Noise may occur when playing WMA files. 	—
Effects do not work.	<ul style="list-style-type: none"> ● Some audio effects do not work or have less effect with some discs. ● Multi Re-master and Dolby Pro Logic II do not work if you have changed the play speed. ● When connected with headphones, only Sound Field Control is effective. 	— — —
Humming heard during play.	<ul style="list-style-type: none"> ● An AC power supply cord or fluorescent light is near the subwoofer. Keep other appliances and cords away from the subwoofer. 	—
There is noise when playing a video tape.	<ul style="list-style-type: none"> ● Adjust the tracking. ● The tape is old or damaged. 	29 —

Listening to the radio

Noise is heard. "ST" flickers or doesn't light. Sound is distorted.	<ul style="list-style-type: none"> ● Adjust the position of the FM or AM antenna. ● Use an outdoor antenna. 	— 10
A beat sound is heard.	<ul style="list-style-type: none"> ● Turn the television off or separate it from the unit. 	—
A low hum is heard during AM broadcasts.	<ul style="list-style-type: none"> ● Separate the antenna from other cables. 	—


Recording

" " flashes when I try to start recording. Cannot record.	<ul style="list-style-type: none"> ● If the erasure prevention tab has been removed, cover the hole with adhesive tape. 	3
Timer recording doesn't record a program correctly.	<ul style="list-style-type: none"> ● Check the clock and calendar. ● Set the channel and start and end times correctly. ● Be sure to press  after programming to put the unit in timer recording standby. ● Program times may be overlapped. 	— — 32 —
Cannot record from other equipment.	<ul style="list-style-type: none"> ● Press [\wedge CH] or [\vee CH] to select "AV". ● Check the connections to the other equipment. 	31 31
Black bands appear in the recording.	<ul style="list-style-type: none"> ● Move the other equipment away from the television as it may be picking up interference. 	—
The copy of a videotape or DVD is very poor.	<ul style="list-style-type: none"> ● This unit complies with industry standards regarding the recording and duplication of copy-protected material. This includes commercial videotapes and DVDs. Consequently, copying not only infringes copyright laws but also presents serious technical difficulties. Even in cases where a copy can be made, the quality will be very poor. 	—



INFO

Unit display

The unit's display lights and changes when the unit is turned off.	<ul style="list-style-type: none"> • Demo function is on. Press and hold [-DEMO] on the main unit to select "DEMO OFF". 	9
The unit's display disappears or fades once the unit is turned off.	<ul style="list-style-type: none"> • The DISPLAY setting is set to "DIM" or "OFF" under OPTION from the VHS MENU. Select "BRIGHT" if you want the display bright all the time. 	38
The tape counter isn't changing.	<ul style="list-style-type: none"> • The tape counter does not change while playing unrecorded parts.  <ul style="list-style-type: none"> • The display also appears like this if the tape is dirty or damaged. Consult your dealer if this is the case. 	—
"NoPLAY"	<ul style="list-style-type: none"> • You inserted a disc the unit cannot play; insert one it can. • You inserted a blank disc. 	15 —
"NoDISC"	<ul style="list-style-type: none"> • You haven't inserted a disc; insert one. • You haven't inserted the disc correctly; insert it correctly. 	— 16
"F61"	<ul style="list-style-type: none"> • Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer. 	5, 7
"U11"	<ul style="list-style-type: none"> • Disc is dirty. Wipe it clean. 	15
"U15"	<ul style="list-style-type: none"> • You inserted a DVD-R that has not been finalized. 	15
"ERROR"	<ul style="list-style-type: none"> • Incorrect operation performed. Read the instructions and try again. 	—
"REMOTE"	<ul style="list-style-type: none"> • The remote control and main unit are using different codes. Change the code on the remote control. 	38
"H□□", "F□□" □□ stands for a number.	<ul style="list-style-type: none"> • Trouble may have occurred. The number following "H" or "F" depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect both AC power supply cords, and then reconnect them. • If the service numbers fail to clear, note the service number and contact a qualified service person. 	— —
"W" is flashing. (When using optional SH-FX50)	<ul style="list-style-type: none"> • There is no link between the main unit and the receiver. Check that the receiver is turned on. • Ensure that the digital transmitter is fully inserted into the slot of the main unit. • This is normal when you set VHS audio type to mono sound mode. 	— — 9, 35
"W01" is flashing. (When using optional SH-FX50)	<ul style="list-style-type: none"> • Re-initialize the main unit: While stopped and "DVD/CD" is the source, press and hold [■] on the main unit and [≥10] on the remote control until "Initialized" disappears from the television. Turn the unit off and on again. If the problem persists, contact a qualified service person. 	—

Television display

"⊙"	<ul style="list-style-type: none"> • The operation is prohibited by the unit or disc. 	—
"Cannot display group xx, content xx"	<ul style="list-style-type: none"> • You are trying to display incompatible contents. 	23
"This disc may not be played in your region"	<ul style="list-style-type: none"> • You can only play DVD-Video if their region number is "1" or if the DVD-Video is marked "ALL". 	Cover
No on-screen display.	<ul style="list-style-type: none"> • Select "On" in "On-Screen Messages" in "Display" tab. • Select "ON" in "OSD" of "OPTION" setting in the VHS MENU. 	27 38
The menu is displayed in a different language.	<ul style="list-style-type: none"> • Select the preferred language in "Menus" in "Disc" tab. • Select the preferred language in "LANGUAGE" in the VHS MENU. 	26 36

Maintenance

Clean this unit with a soft, dry cloth.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.
- Do not use commercially available lens cleaners as they may cause malfunction. (Cleaning of the lens is generally not necessary although this depends on the operating environment.)

Before moving the unit, ensure the disc trays are empty.
Failure to do so will risk severely damaging the discs and the unit.

Cleaning the video heads

Dirt on the video heads can cause poor recording and play.



To clean the heads, insert and eject a tape 5 to 10 times in succession.

If the picture does not improve, use an optional head-cleaning cassette (part number NV-TCL30PT). If the problem persists, seek advice from a qualified service person.

Specifications

■ AMPLIFIER SECTION

System SC-HT830V

RMS output power, 10 % total harmonic distortion

1 kHz FL/FR	70 W per channel 4 Ω
1 kHz Center	260 W per channel 4 Ω
1 kHz SL/SR	70 W per channel 4 Ω
100 Hz Subwoofer	260 W per channel 4 Ω
Total RMS Dolby Digital mode power	800 W

FTC output power, 1 % total harmonic distortion

120 Hz–20 kHz FL/FR	45 W per channel 4 Ω
120 Hz–20 kHz Center	140 W per channel 4 Ω
120 Hz–20 kHz SL/SR	45 W per channel 4 Ω
45 Hz–120 Hz Subwoofer	150 W per channel 4 Ω
Total FTC power in Dolby Digital mode (Band 1 % THD)	470 W

Input sensitivity

AUX	250 mV
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Input impedance

	20 kΩ
--	-------

System SC-HT833V

RMS output power, 10 % total harmonic distortion

1 kHz FL/FR	65 W per channel 4 Ω
1 kHz Center	240 W per channel 4 Ω
1 kHz SL/SR	65 W per channel 4 Ω
100 Hz Subwoofer	250 W per channel 4 Ω
Total RMS Dolby Digital mode power	750 W

FTC output power, 1 % total harmonic distortion

120 Hz–20 kHz FL/FR	42 W per channel 4 Ω
120 Hz–20 kHz Center	128 W per channel 4 Ω
120 Hz–20 kHz SL/SR	42 W per channel 4 Ω
45 Hz–120 Hz Subwoofer	144 W per channel 4 Ω
Total FTC power in Dolby Digital mode (Band 1 % THD)	440 W

Input sensitivity

AUX	250 mV
-----	--------

Input impedance

	20 kΩ
--	-------

■ SPEAKER SECTION

Front speakers SB-FS730

Type 2 way, 2 speaker system, Bass reflex

Speaker unit(s)

1. FULL RANGE	6.5 cm (2 1/2"), cone type, 4 Ω
2. TWEETER	6 cm (2 3/8"), cone type, 4 Ω

Input power (IEC)

	70 W (Music)
--	--------------

Output sound pressure

	81 dB/W (1.0 m)
--	-----------------

Cross over frequency

	6 kHz
--	-------

Frequency range

	80 Hz–41 kHz (–16 dB)
--	-----------------------

Dimensions

	95 Hz–40 kHz (–10 dB)
--	-----------------------

Mass

	218 mm (W) × 984–1080 mm (H) × 241 mm (D)
--	---

Center speaker SB-PC730

Type 2 way, 3 speaker system, Bass reflex

Speaker unit(s)

1. FULL RANGE	6.5 cm (2 1/2"), cone type, 4 Ω
2. SUPER TWEETER	Piezo type, 4 Ω

Input power (IEC)

	260 W (Music)
--	---------------

Output sound pressure

	83 dB/W (1.0 m)
--	-----------------

Cross over frequency

	10 kHz
--	--------

Frequency range

	103 Hz–25 kHz (–16 dB)
--	------------------------

Dimensions

	116 Hz–22 kHz (–10 dB)
--	------------------------

Mass

	320 mm (W) × 84 mm (H) × 95.5 mm (D)
--	--------------------------------------

Surround speakers SB-FS731

Type 1 way, 1 speaker system, Bass reflex

Speaker unit(s)

1. FULL RANGE	6.5 cm (2 1/2"), cone type, 4 Ω
2. SUPER TWEETER	Piezo type, 4 Ω

Input power (IEC)

	70 W (Music)
--	--------------

Output sound pressure

	80 dB/W (1.0 m)
--	-----------------

Frequency range

	88 Hz–22 kHz (–16 dB)
--	-----------------------

Dimensions

	100 Hz–22 kHz (–10 dB)
--	------------------------

Mass

	90 mm (W) × 191 mm (H) × 117 mm (D)
--	-------------------------------------

Active subwoofer SB-WA830, SB-WA833

Type 1 way, 2 speaker system, Bass reflex

Speaker unit(s)

1. FULL RANGE	13 cm (5 1/8"), cone type, 4 Ω
2. SUPER TWEETER	Piezo type, 4 Ω

Input power (IEC)

	80 dB/W (1.0 m)
--	-----------------

Output sound pressure

	40 Hz–220 Hz (–16 dB)
--	-----------------------

Frequency range

	45 Hz–180 Hz (–10 dB)
--	-----------------------

Dimensions

	200 mm (W) × 367.5 mm (H) × 492 mm (D)
--	--

Mass

	(77/8" × 147/16" × 19 3/8")
--	-----------------------------

11.3 kg (24.95 lbs)

■ DISC SECTION

Discs played [8 cm (3") or 12 cm (5")]

- (1) DVD-RAM (DVD-VR formatted discs, JPEG formatted discs)
- (2) DVD-Audio
- (3) DVD-Video
- (4) DVD-R, DVD-RW (DVD-Video compatible)
- (5) +R, +RW (Video compatible)
- (6) CD-Audio (CD-DA)
- (7) Video CD
- (8) SVCD (Conforming to IEC62107)
- (9) CD-R/CD-RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted discs)
- (10) MP3/WMA

●Maximum number of tracks and groups recognizable:

4000 tracks and 400 groups

●Compatible compression rate:

MP3: between 32 kbps and 320 kbps

WMA: between 48 kbps and 320 kbps

(10) JPEG

●Exif Ver 2.1 JPEG Baseline files

●Maximum number of pictures and groups recognizable:

4000 pictures and 400 groups

●Picture resolution: between 320×240 and 6144×4096 pixels

(sub sampling is 4:2:2 or 4:2:0)

(11) HighMAT™ Level 2 (Audio and Image)

Video

Signal system

Output level

NTSC
Composite video: 1 Vp-p (75 Ω)
S-video: 1 Vp-p (Y), 0.286 Vp-p (C) (75 Ω)
Component video: 1 Vp-p (Y) (75 Ω)
0.7 Vp-p (Pb/Cb, Pr/Cr) (75 Ω)

Audio

Sampling frequency

CD

MP3

DVD VIDEO

DVD-Audio

Decoding

Pick up

Beam Source

Wavelength

CD/VCD

DVD

Number of channels

Frequency response

5.1 ch (FL, FR, SL, SR, C, SW)
20 Hz–20 kHz (+1, –2 dB)

■ VHS SECTION

Video recording system

Video heads

Audio heads

Tape speed

Tape format

Recording/playback time

FF/REW time

VIDEO

Television system

Modulation system

Input level

Output level

Antenna receive input

2 rotary heads, helical scanning system
4 heads
2 heads
SP: 33.35 mm/s, EP: 11.12 mm/s
VHS tape
SP: 120 min. with NV-T120
EP: 360 min. with NV-T120
Approx. 54 s. with NV-T120 (FF/REW)
Approx. 36 s. with NV-T120 (JET REW)
EIA: Standard (525 lines, 60 fields),
NTSC color signal
Luminance: FM azimuth recording
Color signal: converted subcarrier phase shift recording
VIDEO IN: 1 Vp-p, 75 Ω
VIDEO OUT: 1 Vp-p, 75 Ω
VHF 2–13 CH, 75 Ω
UHF 14–69 CH, 75 Ω
CATV 5A and A-5–EEE CH, 75 Ω

AUDIO

Input level

Output level

Audio track

Video horizontal resolution

Signal-to-Noise ratio

Audio frequency response

Wow and flutter

AUDIO IN (PHONO): –10 dBV, 47 kΩ
AUDIO OUT (PHONO): –8 dBV, 1 kΩ
1 track (normal-mono only),
2 channels (Hi-Fi sound stereo)
Color: more than 200 lines
Video: more than 40 dB/SP
Audio: more than 60 dB/Hi-Fi
20 Hz–20 kHz/Hi-Fi
0.005 %

■ FM TUNER SECTION

Frequency range

Sensitivity

S/N 26 dB

Antenna terminals

Preset station

87.9–107.9 MHz (200 kHz step)
87.5–108.0 MHz (100 kHz step)
2.5 μV (IHF)
2.2 μV
75 Ω (unbalanced)
15

■ AM TUNER SECTION

Frequency range

AM Sensitivity S/N 20 dB at 1000 kHz

Preset station

520–1710 kHz (10 kHz step)
560 μV/m
15

■ GENERAL

RF converter

Power supply

Power consumption

Main unit

Subwoofer

Dimensions

Mass

Power consumption in standby mode

BRIGHT mode

DIM mode

OFF mode

Not provided
AC 120 V, 60 Hz
38 W
340 W
430 mm (W) × 105 mm (H) × 354 mm (D)
(16 15/16" × 4 1/8" × 13 15/16")
4.5 kg (9.92 lbs)

Approx. 3.7 W (main unit) + 0 W (subwoofer)
Approx. 3.4 W (main unit) + 0 W (subwoofer)
Approx. 1.9 W (main unit) + 0 W (subwoofer)

Note

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.



INFO

Warranty (ONLY FOR U.S.A.)

Panasonic Electronics Company,
Panasonic Corporation of North America
20000 Rockledge Drive, Suite 100
Farmingdale, New Jersey 07094

Panasonic Puerto Rico, Inc.
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic Audio Products Limited warranty

Panasonic Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as the "warrantor") warrants the length of the period indicated on the chart below, which starts from the date of purchase ("warranty period"), at its option either (a) repair your product or (b) replace it with a new or a refurbished product. The decision will be made by the warrantor.

Product or Part	Parts	Labor
Audio Products (except as shown below)	One (1) year	One (1) year
USB Reader/Writer, Personal Card Adapter (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries, DVD-R/-RAM Discs (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You may choose to carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are not warranted. This warranty only applies to products purchased and used in the United States or Puerto Rico. This warranty is extended only to the original purchaser of the product which was not sold "as is". A purchase receipt or other proof of the original purchase is required for warranty service.

Carry-In or Mail-In Service

For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (1-800-211-7262) or visit Panasonic web site: <http://www.panasonic.com>
For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other memory content. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directories

Obtain Product Information and Operate your product; purchase Accessories; or make Customer Service requests, visit our Web Site at:
<http://www.panasonic.com/consumer>
or, contact us via the web at:
<http://www.panasonic.com/contact>
You may also contact us directly at:
1-800-211-PANA (7262),
Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-6 pm

For hearing or speech impaired TTY users, TTY: 1-800-211-7262

Accessory Purchases

Purchase Parts, Accessories and Instructions, visit our Web Site at:
<http://www.pasc.panasonic.com>
or, send your request by E-mail to:
npcparts@us.panasonic.com
You may also contact us directly at:
1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday-Friday)
Panasonic Services Company
20421 84th Avenue South, Kent, WA 98032
(We Accept Visa, MasterCard, Discover Card, American Express)

For hearing or speech impaired TTY users, TTY : 1-866-237-9080

Service in Puerto Rico

Panasonic Puerto Rico, Inc.
Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park,
Phone (787)750-4300, Fax (787)768-2910



Limited Warranty (ONLY FOR CANADA)

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3

PANASONIC/TECHNICS PRODUCT—LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect, or at its option, replace the product for a period as stated below from the date of original purchase.

Technics Audio Product

One (1) year, parts and labour

Panasonic Audio & DVD Product

One (1) year, parts and labour

Accessories including rechargeable batteries

Ninety (90) days

LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability or detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

WARRANTY SERVICE

For product operation and information assistance, please contact your Dealer or our Customer Care Centre at: Telephone #: (905) 624-5505
Fax #: (905) 238-2360 Web: www.panasonic.ca

For product repairs, please contact one of the following:

- Your Dealer who will inform you of an authorized Servicentre nearest you.
- Our Customer Care Centre at (905) 624-5505 or www.panasonic.ca
- A Panasonic Factory Servicentre listed below:

IF YOU SHIP THE PRODUCT TO A SERVICENTRE

Carefully pack and send prepaid, adequately insured and preferably in the original carton.
Include details of the defect claimed, and proof of date of original purchase.

1. Damage requiring service—The unit should be serviced by qualified service personnel if:

- (a) The AC power supply cord or AC adaptor has been damaged; or
- (b) Objects or liquids have gotten into the unit; or



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Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend that you avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Accessories



Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of December 2004. These may be subject to change.)

(Only for U.S.A.)

To order accessories, refer to "Accessory Purchases" on page 49.

(Only for Canada)

To order accessories, call the dealer from whom you have made your purchase.

☐ **1 Remote control**
(EUR7722XJ0)

☐ **2 AC power supply cords**
(K2CB2CB00006)

☐ **1 FM indoor antenna**
(RSA0007-L)

☐ **1 75 Ω coaxial cable**
(VJA1125)

☐ **3 Speaker cables**
1 \times 4 m (13 foot) cables
(REEX0449B-1K)
2 \times 10 m (33 foot) cables
(REEX0449G-1K)

☐ **2 Pipes A**
(RYQV0057-1)

☐ **2 Batteries**
for remote control

☐ **1 AM loop antenna**
(N1DAAAA00002)

☐ **1 Video cable**
(RJL1P016B15A)

☐ **1 System cable**
(K1HA25HA0001)

☐ **1 Sheet of speaker-cable stickers**

☐ **2 Pipes B**
(RMAV0033-S)

☐ **2 Bases**
(RYQV0058-S)

☐ **4 Washer screws**
(XTW5+10LFJ)

☐ **2 Small screws**
(XTB3+8FFJ)

☐ **2 Brackets**
(RMAV0032-S)

☐ **4 Bracket screws**
(XSN5+10FN)

☐ **20 Rubber pads**
(RKA0072-KJ)

User memo:

DATE OF PURCHASE _____
DEALER NAME _____
DEALER ADDRESS _____
TELEPHONE NUMBER _____

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER _____
SERIAL NUMBER _____

Panasonic Consumer Electronics Company, Division of Panasonic Corporation of North America
One Panasonic Way, Secaucus,
New Jersey 07094
<http://www.panasonic.com>

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Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina,
Puerto Rico 00985

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